



**KT 90
BEAM PENTRODE
FOR AF POWER AMPLIFIER
APPLICATIONS**

The KT-90 is a beam-power pentode primarily designed for use in audio frequency power amplifier applications. It carries a 50 watt anode dissipation rating which provides for push-pull amplifier utilization up to 110 watts output per pair with 550 volts on the anode. Up to 160 watts per pair may be derived with an anode voltage of 750 V and 600 V on the screen grid - well within the design centre maximum parameters.

The KT-90 is recommended as a replacement for the 6550, 6550A, and KT-88 with major benefits as to power output, vastly increased anode and screen grid maximum voltage, lower distortion, and cool running leading to greatly extended useful tube life.

GENERAL

ELECTRICAL

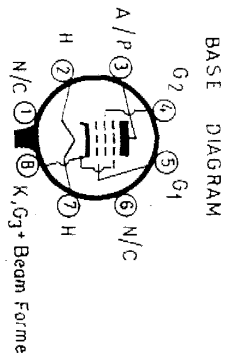
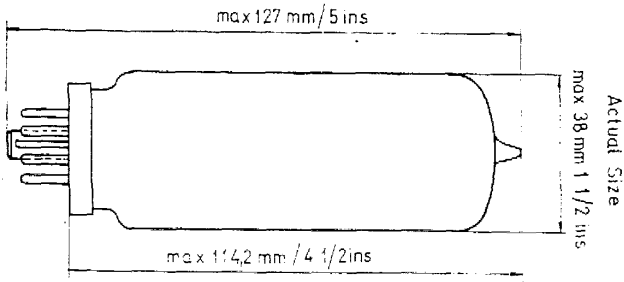
Heater characteristics and ratings:	
Heater voltage AC or DC	6.3 ± 0.6 volts
Heater current	1.6 amperes
Direct interelectrode capacitances:	
Grid - Number 1 anode	1.8 pF
Grid 1 to (H + K + G ₂ + BA + A)	29 pF
Anode to (H + K + G ₂ + BA + G ₁)	10 pF

MECHANICAL

- Mounting position - Any
- Envelope - Glass
- Base - Universal octal 8-pin

TERMINAL CONNECTIONS

- PIN 1 - No Connections
- PIN 2 - Heater
- PIN 3 - Anode
- PIN 4 - Grid number 2 (screen)
- PIN 5 - Grid number 1
- PIN 6 - No Connection
- PIN 7 - Heater
- PIN 8 - Cathode and Beam Forming tube



MAXIMUM RATINGS (ABSOLUTE)

	Pentode Connection	Triode Connection
Ua	750 V	600 V
Ug2	650 V	600 V
Ua Ug2	650 V	600 V
Ug1	200 V	200 V
Pa (Dissipation)	50 W	50 W
Pg2	8 W	-
Pa + g2	54 W	-
Ik	230 mA	230 mA
Ik-t (total DC)	300 V	300 V

CHARACTERISTICS

AS A GUIDE

Average characteristics, pentode connection

Ua	250 V	400 V
Ug2	250 V	300 V
Ug1	14 V	27 V
la	145 mA	90 mA
lg2	8 mA	4.7 mA
-Ug1 (la = 1mA Approx)	36 V	42 V
gm	14 mAV	8.8 mAV
Ri (Approx)	11 Kohm	25 Kohm

AVERAGE CHARACTERISTICS, TRIODE CONNECTION

Ua, Ug2	250 V
-Ug1	14 V
la + g2	153 mA
gm	15 mAV
Ri (approx)	650 ohms
(amplification factor)	9

